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ABSTRACT

A polymer electrolyte fuel cell comprising a polymer electrolyte made of an ion exchange membrane, catalyst layers disposed on both sides thereof and current collectors disposed on the outer sides thereof, wherein a solvent-soluble fluorine-containing polymer (preferably a polymer having a fluorine-containing aliphatic ring structure) having substantially no ion exchange groups, is incorporated in the current collectors.

By the above construction, the current collectors can have a high water repellency for a long period of time, and the polymer electrolyte fuel cell can operate at a high output density constantly over a long period of time.